

Amendment After Allowance under 37 CFR 1.312
Date filed **August 1, 2006**
U.S. Patent Application Serial No. **10/807,516**

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 Claim 1 (Previously Presented): A reamer apparatus for a ground boring machine,

2 comprising:

3 a substantially hollow conical reamer main body which diameter reduces towards a drawing
4 side;

5 a rod connecting portion provided at a narrow diameter end portion of the reamer main body
6 for connecting with a rod; and

7 a coupling structure provided on an opposite side of the rod connecting portion, wherein
8 the coupling structure has a swivel joint that allows rotation of the reamer main body with
9 respect to a buried pipe,

10 and a main portion of the swivel joint is substantially accumulated and extends within the
11 reamer main body.

1 Claim 2 (Previously Presented): The reamer apparatus for a ground boring machine

2 according to claim 1, wherein

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3 the swivel joint is arranged in that a rotating side on the reamer main body side and a non-
4 rotating side on the side of the buried pipe are sealed by a floating seal.

1 Claim 3 (Currently Amended): A reamer apparatus for a ground boring machine,
2 comprising:

3 a substantially hollow conical reamer main body which diameter reduces towards a drawing
4 side;

5 a rod connecting portion provided at a narrow diameter end portion of the reamer main body
6 for connecting with a rod;

7 a coupling structure provided on an opposite side of the rod connecting portion, wherein
8 a cover for preventing intrusion of sediments is attached to the reamer main body to
9 encompass an outer peripheral side of the coupling structure by the cover for preventing intrusion
10 of sediments while a clearance is formed between a buried pipe and an end portion of the cover and
11 a buried pipe for preventing intrusion of sediments on a side that is opposite to the reamer main body
12 side.

1 Claim 4 (Previously Presented): The reamer apparatus for a ground boring machine
2 according to claim 3, wherein

3 the cover for preventing intrusion of sediments is arranged in that an end portion thereof on
4 the reamer main body side is plunged into the reamer main body.

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1 Claim 5 (Previously Presented): A reamer apparatus for a ground boring machine,
2 comprising:

3 a substantially hollow conical reamer main body which diameter reduces towards a drawing
4 side, wherein

5 a partitioning member is disposed in the vicinity of an aperture of the reamer main body on
6 a side of a buried pipe,

7 a passage is formed within the reamer main body through which drilling fluid is supplied for
8 injecting a drilling fluid to a portion to be drilled through emission ports, and

9 an injection tip is provided at the partitioning member through which the drilling fluid that
10 has entered the passage is discharged to the side of the buried pipe.

1 Claim 6 (Previously Presented): A reamer apparatus for a ground boring machine,
2 comprising:

3 a substantially hollow conical reamer main body which diameter reduces towards a drawing
4 side;

5 a rod connecting portion provided at a narrow diameter end portion of the reamer main body
6 for connecting with a rod; and

7 a coupling structure provided on an opposite side of the rod connecting portion,
8 wherein:

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9 the coupling structure has a swivel joint that allows rotation of the reamer main body with

10 respect to a buried pipe,

11 and a main portion of the swivel joint is substantially accumulated in the reamer main body,

12 and

13 the swivel joint is arranged in that a rotating side on the reamer main body side and a non-

14 rotating side on the side of the buried pipe are sealed by a floating seal.